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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,627	09/05/2003	Richard A. Holl	P03-RHOLL-0053	8132

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EXAMINER
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BHAT, NINA NMN

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/656,627

Applicant(s)

HOLL, RICHARD A.

Examiner

N. Bhat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-5, 7, 11, 13, 14, 15, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Vander Mey et al.

Vander Mey et al. teach a thin film reactor. Wherein a stream of organic liquid is introduced onto a plurality of reactants to the reacting surfaces, rotating the reacting surfaces at velocity that the organic liquids continuously formed into a thin film on the reacting surfaces and is continuously moved as a thin film towards the periphery of each reacting surface by centrifugal force, the apparatus and method includes feed a first reactant to the reactor surface at a first entry location, and feed a second reactant to the reactor surface a second entry location. Specifically, the first reactant is an organic liquid and the second reactant is a gas. The apparatus is described in Column 2, lines 31+ which teaches a reaction chamber comprising a vertically disposed rotatable spinning disc, first and second oppositely facing reaction surfaces internal for the spinning disc first inlet means for introducing an organic liquid a second inlet means spaced radially outward from the first inlet means to introduce a gaseous

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medium over the first and second reacting surfaces at a location radially outward from the first inlet; means driving means to rotate the disc at an angular velocity to create a centrifugal force which forms a thin film of the liquid on each of the first and second reaction surfaces. There is provided collecting means which is operatively connected to the reactor product outlet means.[Note Column 4, lines 43-50. Vander Mey et al. further teach providing cooling means or heat exchange means to heat or cool the reactants. [Note Column 4, lines 63-67] Vander Mey et al. fully anticipates applicant's method and apparatus as claimed.

3. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ramshaw et al. USP 6,858,189

Ramshaw et al. teach methods of operating RSORT reactors which includes providing a reactor body having a reactor surface; feed a first reactant to the reactor surface at a first entry location such that the reactant spreads out on the surface from the entry location in the form of a thin film, feeding a second reactant to the reactor surface and collecting the resultant product of the first and second film at the periphery of the surface.[Note Column 2, lines 44-61 and Figure 8]. Ramshaw et al. teach that the reactor includes a spinning disc onto which troughs can be formed, specifically a plurality of troughs and feeds can be provided to perform a plurality of different reactants. Ramshaw et al. provide first, second and third reactants, which can be added to the spinning disc. Ramshaw further teaches that apparatus includes collection means for collection of the reacted product as it leaves the rotating surface. Also taught is providing Heat exchange means which is operatively connected to the spinning disc

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or rotating surface. [Note Column 4, lines 5 et seq.] Ramshaw et al. in Column 9, lines 44-Column 11, line 30, teaches the operation of the reactor. It is maintained that Ramshaw et al. fully anticipate applicant's claims as presently drafted. With respect to applicant's proviso of polishing, Ramshaw et al. teach in Column 8, lines 22-32, that the rotating surface can be of any shape and surface formation which would broadly read on a polished surface, i.e., there is no distinction between polished and unpolished where there is a teaching that it can have any surface formation.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Umetsu teach an apparatus for produce polyacetylene film using a rotating surface reactor. EP 1464389 teach rotating surface of revolution reactor with rotary fan or impeller. Brechtelsbauer et al. teach a process for epoxidizing cyclohexanones using a spinning disc reactor. GB 2 108 407 teach epoxide polymerization using spinning disc reactors. Porter et al. teach a centrifugal device for contacting a liquid with a gas. EP 0 499 362 teach a destruction process for photocatalytically degradable organic material using a spinning disc reactor. Ramshaw et al. PGPUB 2003/0161767 teach rotating surface of revolution reactor with feed and collection mechanisms. Jachuck USPGPUB 0236039 teach spinning disc RSORT polymerization reactors. Jachuck et al. 2004/0241430 teach a method of manufacturing particles. Ramshaw et al. 2005/0158220 teach rotating surface of revolution reactor with feed and collection mechanisms.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



N. Bhat  
Primary Examiner  
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